JUSPAY

Juspay & the Indian payments opportunity

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VEF

The emerging market fintech investor

Photo: Rashtrapati Bhavan, India (Kriangkrai Thitimakorn, Getty Images).

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The Indian payments opportunity

Photo: Juspay

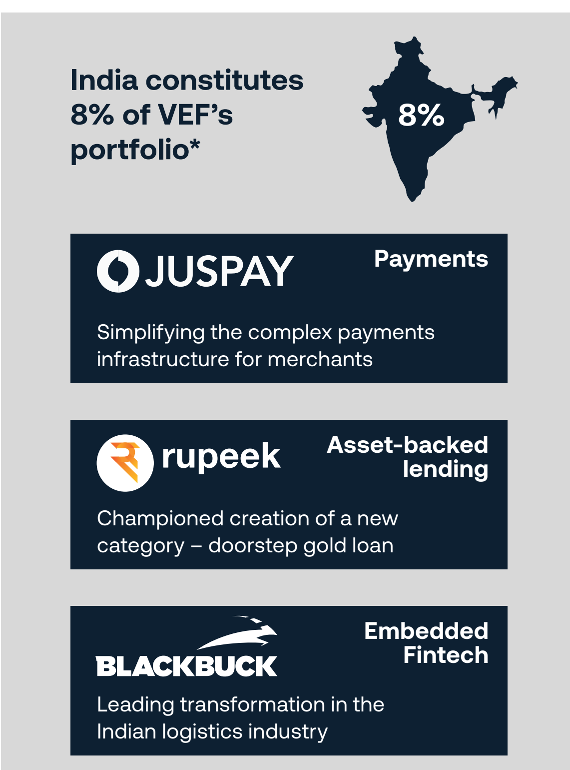
Introduction – Indian Fintech (public and private)

In our investment universe of Emerging Market (EM) Fintech, there are few countries that present a larger opportunity than India. We consider it a core market in which to grow our portfolio, having first invested there in early 2020, and we have made three investments in total – Juspay, Rupeek and BlackBuck.

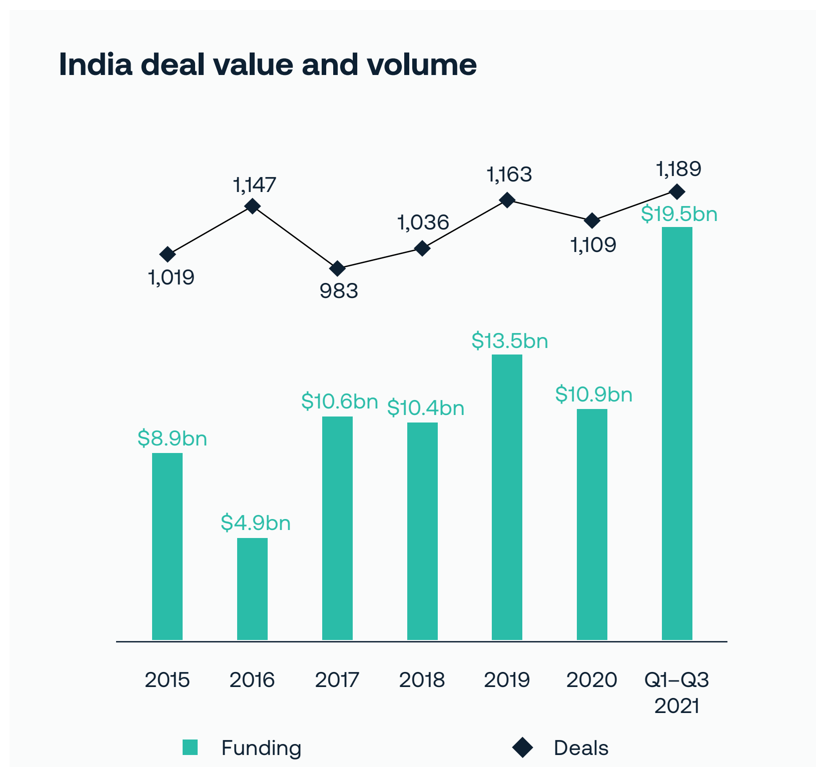
India's financial services landscape is characterized by many highly competitive incumbents, a very dynamic set of government initiatives and a proactive, protective regulator. The unique combination of these factors has driven the acceleration of financial inclusion unlike anywhere else. Government efforts to curtail the shadow economy paired with breakneck growth in smartphone penetration and data usage has created a thriving Fintech environment. As a result, India has experienced one of the most dramatic progressions in penetration of financial services globally, with some of the world's most advanced infrastructure providing the tools for innovation.

The combination of COVID accelerating digital adoption and a buoyant global funding background has resulted in a banner year for Indian private and public markets. Unicorns have been created in a wide range of Fintech subcategories, ranging from digital insurance (Digit Insurance) to Investments (Groww), payments (Pine Labs, BharatPe) and logistics (Blackbuck, which VEF became a shareholder in). Public markets have been similarly active, with two large Fintech IPOs from Policy Bazaar and Paytm. The latter successfully raised US$2.5bn, India's largest ever IPO, giving it a market cap of US$12bn at the time of writing.

At VEF we are very excited by the investment prospects offered in India, with huge long-term secular trends and opportunities to generate shareholder value. We are equally excited to learn from and participate in one of the most innovative Fintech ecosystems offering valuable read-across to some of our other core markets.



* As of Q3 2021



Source: CB Insights

The opportunity in payments

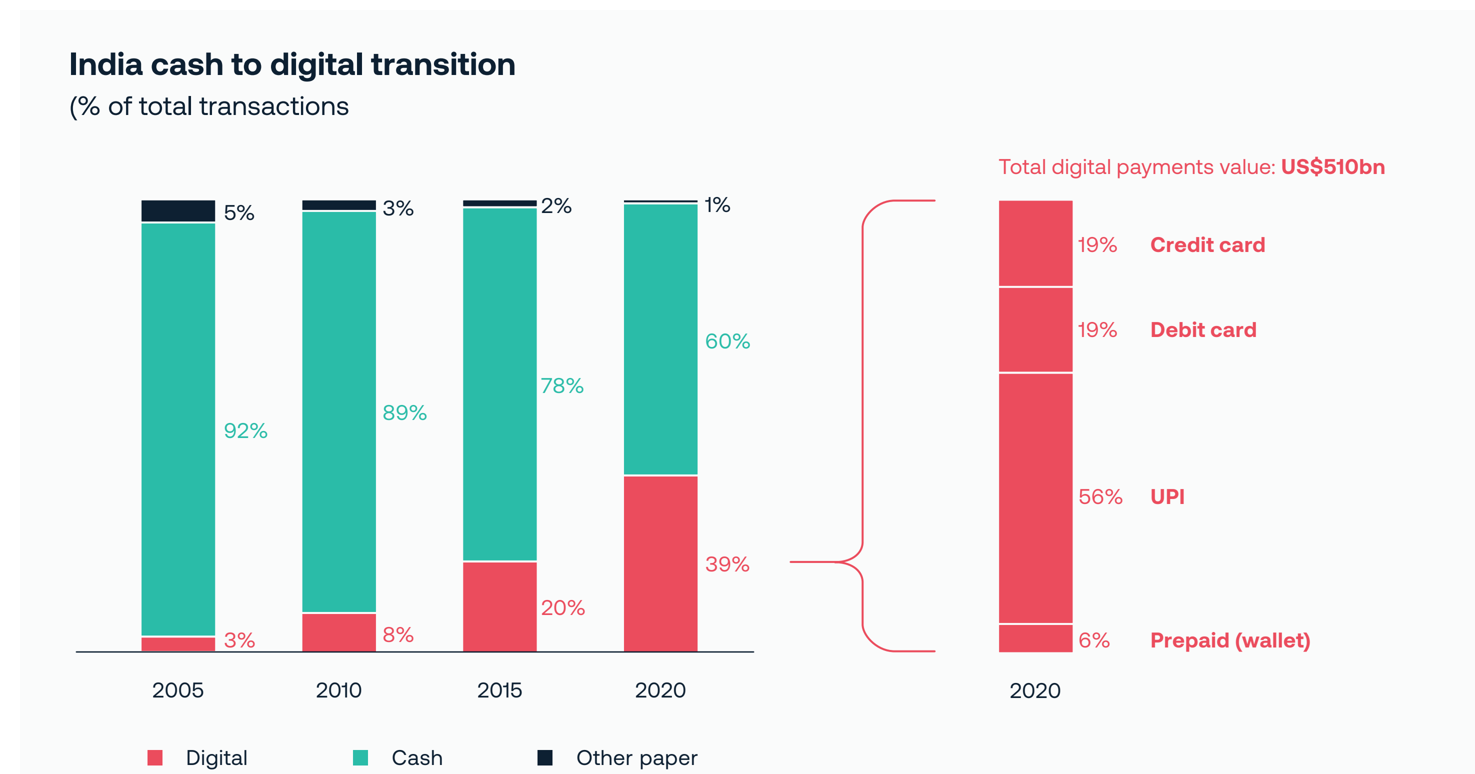
India is an attractive payments market because it is still relatively early in its transition from cash to digital. While the share of digital payments has been increasing, cash remains the preferred mode (60% in 2020). We at VEF have seen first-hand how backing the right team to exploit this transition is a proven path to value creation, having invested in Turkey's leading online payments provider Iyzico in 2017, which was subsequently acquired by Naspers in 2019, generating a 57% IRR for VEF.

In India, we expect to see continued progress on this war on cash, with larger scale value creation opportunities. Increased digital adoption will likely be most pronounced in rural areas and driven by continued growth in offline payment schemes.

Below we review some key characteristics of the Indian payment market:

– *History of payment innovation and superior technology increasing adoption:* The government has been the primary agent of change in modernising India's payment infrastructure, all with the goal of increasing financial inclusion. This has ranged from an overnight banknote demonetisation to introducing the India Stack, a one-of-a-kind set of application programming interfaces (APIs) designed to bring India's population into the digital age by issuing unique IDs (Aadhaar) to almost every member of the population. Additionally, public infrastructure was launched offering free, instant, 24/7 settlement of payments on Unified Payments Interface (UPI). India has seen strong growth in digital payments growing at 60% CAGR over the last five years, led by UPI, where the total value of UPI transactions in FY21 was at c. US$560 bn (up from US$510bn in 2020 – see chart below),[1] which has far outpaced in both volume and value terms credit and debit card transactions. Global tech players are driving adoption with strong merchant acquisition along with increasing use cases.

1. Source: RBI



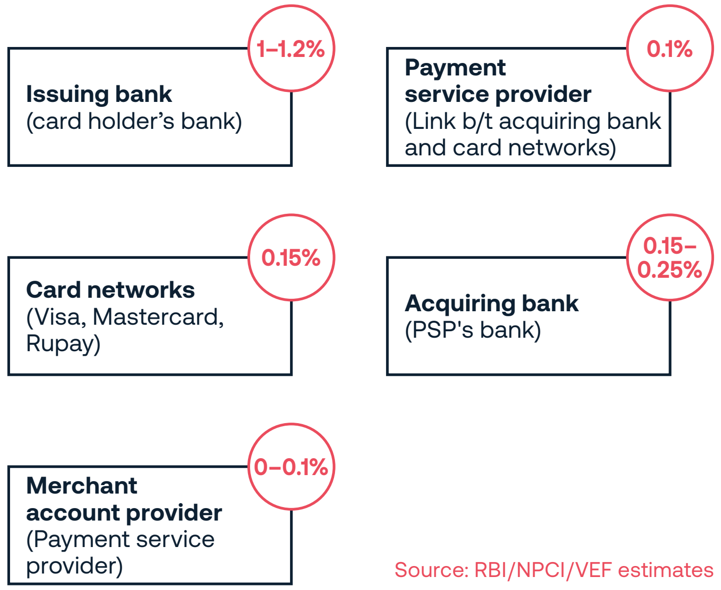
Source: NASSCOM

– *Low unit economics and commoditisation:* Take rates, on average, are low across the various players in the payment space. In addition to competition to acquire volumes, the government and RBI have reduced the Merchant Discount Rate (MDR) of many payment schemes to promote digital payments and financial inclusion. This is a significant factor in driving adoption, particularly when UPI P2P became free, although it presents somewhat of a barrier for Fintechs to innovate around given low MDRs.

This has led to payment companies launching value-added services to increase monetisation. Examples include:

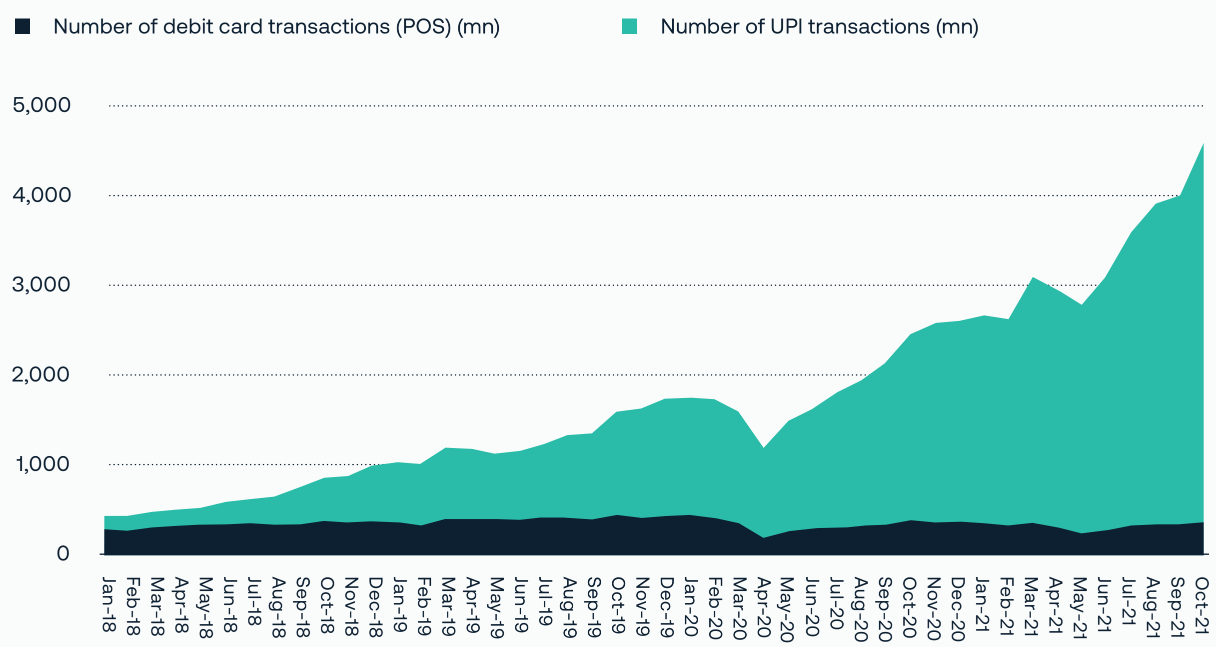
- UPI-based issuers are diversifying into offering financial services to capitalise on large customer/merchant base they have built.
- Acquiring businesses are starting to lend, funding the merchant based on digital sales volumes and facilitating seamless Buy-Now-Pay-Later (BNPL) for customers through their touch points.

Indian payments low unit economics



Source: RBI/NPCI/VEF estimates

Digital payments are far exceeding debit card transactions now



India has launched free, instant and 24/7 digital payment infrastructure which has grown to dwarf other traditional forms of electronic payments, leapfrogging even developed nations.

Source: RBI

– *Tentative signs of consolidation:* Prosus, the global consumer internet group and one of the largest technology investors in the world, acquired BillDesk for US$4.7bn in August of this year. BillDesk is a one-stop online payment provider that helps customers organise, pay, and manage their regular and ongoing bills. The platform is used by consumers, banks, and companies. Prosus already owned PayU, which operates in multiple markets including India. PayU is an online payment gateway, and with the BillDesk transaction it has become the market leader in Total Payment Volume (TPV) terms. In our view, the primary motivation for the deal was to lower the per-unit cost of transactions via BillDesk's scale and to gain access to its huge network of banks and relationships to offer more services in the future. In addition, its stronger focus on large merchants should help PayU's micro-lending business reach new potential users for its BNPL service, increasing monetisation. We expect further consolidation as leading players look to acquire scale volume and/or tech talent.

– *High levels of friction:* Indian payments infrastructure is very complex with unique payment methods, mandatory 2 Factor Authentication (2FA), and many processors and wallets, amongst other challenges. This creates a lot of friction for merchants and consumers in digital payments, resulting in slow transaction speeds and low success rates. This is most acute for larger merchants, who often spend a great deal on marketing to bring the customer to their apps only to experience a large drop off at point of payment due to the high friction. Solving this with simple scalable solutions will create significant value for merchants.

Indian payments friction points

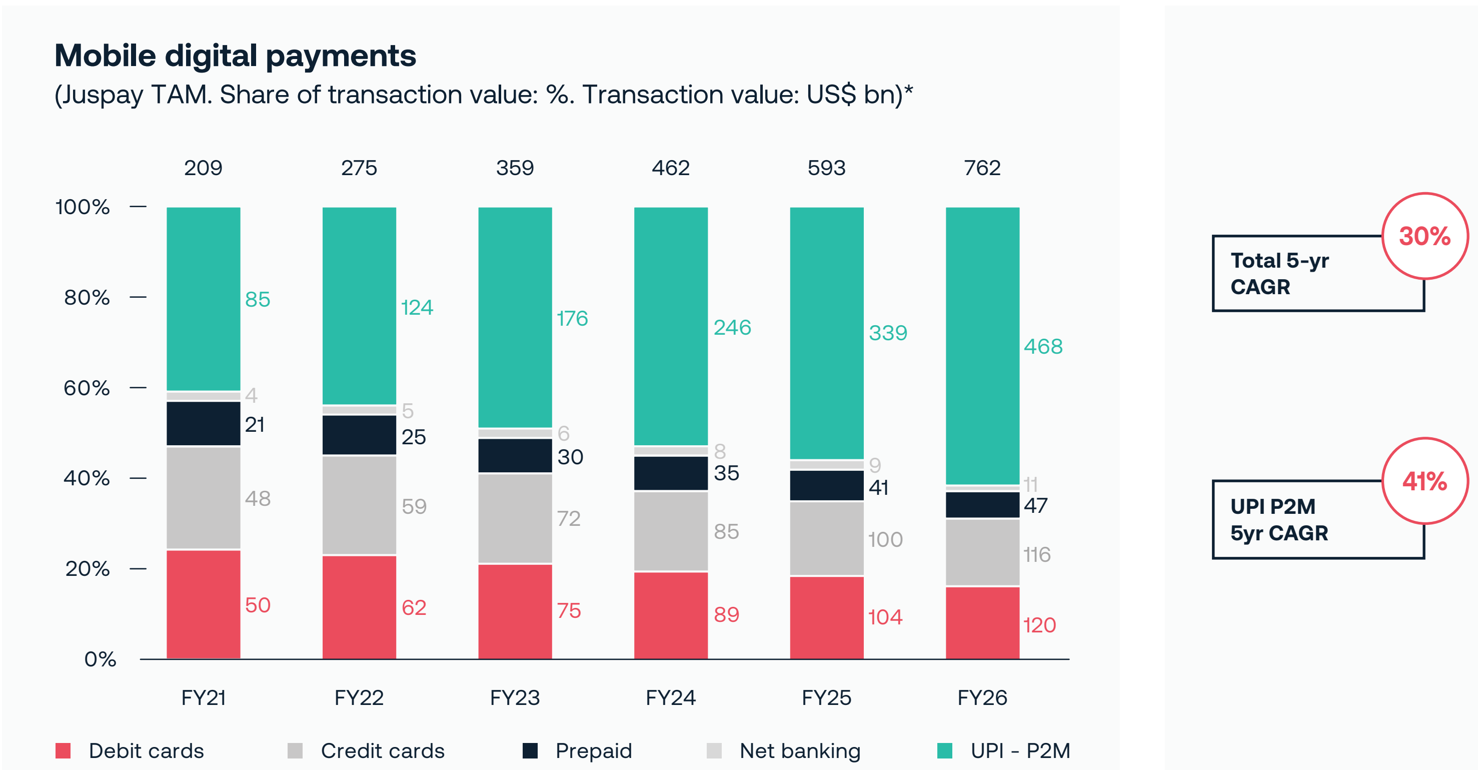
65%	**Low success rate** Average success rate in India vs. 90% in USA	100+	**Fragmented integrations** Distinct payment options with low performance
75 sec	**Multiple friction points** Average payment time per t/a due to 2FA	Low NPS	**Poor UI/UX** Poor UI/UX induced friction → higher drop-offs and lower conversion

Source: Juspay

Photo: Atharva Tulsi (Unsplash)

– *Mobile payments to lead growth:* Mobile payments is the fastest growing portion of the overall payments market in India. Its total addressable market (TAM) is estimated at US$209bn in fiscal year 2021 (year-to-March 2021). This factors in the share of online transactions from credit/debit cards, prepaid cards (e-wallet share), e-commerce transactions (net banking) and P2M (peer-to-merchant) UPI transactions. This TAM is expected to grow to US$762bn by fiscal year 2026, a 4x increase. The major driver will be UPI, where adoption rates driven by large merchants are expected to accelerate.

Note: UPI P2P was US$477bn in FY 2021 and is expected to also grow rapidly to US$1.9trn by FY 2026.



* 73 USDINR exchange rate assumed for duration of forecasts.
Source: Avendus/Juspay.

– *Other areas of opportunity within payments:* In addition to mobile payments, we believe there are many other attractive areas of investment. Two examples are:
  – BNPL: With an acceleration in e-commerce and digital payments options, small-ticket BNPL loans are gaining popularity, driven by new-to-credit (NTC) customers. BNPL loans increase access to credit, provide flexible repayment options, and do not have any processing fees, hidden charges or required documentation.[1]

– Digital wallets: The digital wallet ecosystem accounts for a small portion of payment value today. The RBI has issued guidelines to make it mandatory for all pre-paid instruments such as mobile wallets and prepaid cards to be interoperable by March 2022. This will let a customer send money from a wallet to a bank account and from one company's wallet to another and should lead to a material increase in transactions and therefore revenue/cross selling opportunities within leading digital wallet players.

1. Source: GS Buy-Now-Pay-Later: Creating a funnel for US$35bn+ credit opportunity

– *A model for other countries:* India's payment infrastructure has leapfrogged even developed markets in many regards and is looked to as a benchmark of innovation. The National Payments Corporation of India (NPCI) is exporting its expertise globally, signing Memorandum of Understandings (MoUs) with Singapore, UAE and PPRO, the leading global provider of local payments, to partner together to expand and empower international growth of India's digital payments ecosystem.
  – *UPI has brought many clear benefits to the Indian ecosystem:*
    – Its simplicity via a single API connecting all bank accounts has increased adoption – the share of digital transactions in the country has sharply increased, helping the government win its war on cash.
    – P2P transactions are instant and free. This has levelled the competitive playing field.
    – New value-added service use cases have been built on top of the infrastructure, increasing financial inclusion, and creating new monetisation streams for Fintechs.

Speed, transparency, integrated information, and process simplification have a ripple effect of benefits. These benefits will accrue to other countries adopting similar technology providing new and attractive investment opportunities. We are excited to see many other countries going down this path, notably Brazil with PIX but also frontier markets like Pakistan and Egypt.

Photo: Getty Images

VEF's investment in Juspay

Introduction

VEF led Juspay's Series B round in Q1 '20, investing US$13m for a 10% stake. We also recently participated in its Series C, which raised a total of US$60m led by Softbank.

Founded in 2012, Juspay offers an intelligent technology platform which unifies payment gateways to give merchants a seamless, secure, reliable, end-to-end, enterprise-grade payment stack to achieve higher revenue at lower cost. It is on a mission to build a robust payments operating system for India. It has played a pivotal role in improving the user experience for billions of payment transactions for leading merchants like Amazon, Flipkart and Swiggy. It processes 11 million transactions per day, one of the highest in India, with best-in-class reliability.

Juspay's solutions have transformed the 3 important layers of payments: customer experience, payments integration, and the foundational banking infrastructure.

It has two co-founders – Vimal Kumar (CEO) who is an engineer by training and led Amazon's Web Services and Amazon Flexible Payments Services in India prior to starting Juspay, and Sheetal Lalwani (COO), a school friend of Vimal's and a computer engineer also with a tenured career at Bloomberg.

Payment control center (Photo: Juspay)

Fixing the payment experience end-to-end

Juspay's strong value proposition of removing friction and delivering strong product innovation sets it up for a multi-year period of rapid growth.

Removing friction

Its products include:

Juspay Safe – the world's first payment browser that simplifies payment authentication with features like One Time Password (OTP) auto-read and device-based authentication for fast and secure payments.

HyperSDK – the largest payments Software Development Kit (SDK) distribution that enables merchant agility with instant app update capabilities and a fully customisable native payment experience.

Express Checkout – India's leading payments orchestration platform with multiple payment options and smart routing systems to boost transaction success rates for merchants.

UPI in a Box – a highly reliable UPI stack for merchants and a first of its kind, On-Cloud UPI Payment Service Provider (PSP) to power large transaction volumes for banks.

Large merchants in India spend considerably on customer acquisition marketing, only to experience low conversion rates (60–65%) at checkout due to payment option friction. Juspay's technology increases conversion rates towards 75%, resulting in an average 5–10% revenue uplift. Additionally, merchants experience a positive NPS effect as transactions have a higher probability of succeeding.

Juspay is also removing complexity for large merchants by offering expansive payment integrations. Merchants must deal with multiple payment types, and larger merchants require bespoke solutions. Juspay solves this complexity by providing merchants with a unifying payment layer, reducing merchant transactions costs through smart routing, which customises and optimises payment order flow as part of its payment page product.

Juspay value proposition to merchants

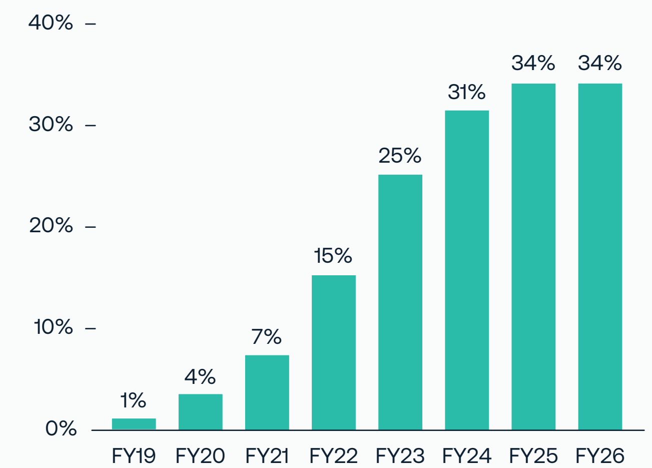
Source: Juspay

Strong product innovation

Juspay is constantly innovating its product suite, through partnerships with the government at the infrastructure layer, anticipating changing regulations and responding to large merchant product needs. Examples include:

UPI:
Juspay has been instrumental in building the infrastructure behind the UPI network for NPCI, giving them deep knowledge of the intricacies of the most important digital payment method in India today. UPI version 3.0 is launching in 2022, in part built by Juspay, which should, amongst other things, facilitate more digital onboarding of merchants. Juspay is set to become an important participant in the payment flows to merchants on UPI over time, as more large merchants shift volumes to these payment rails.

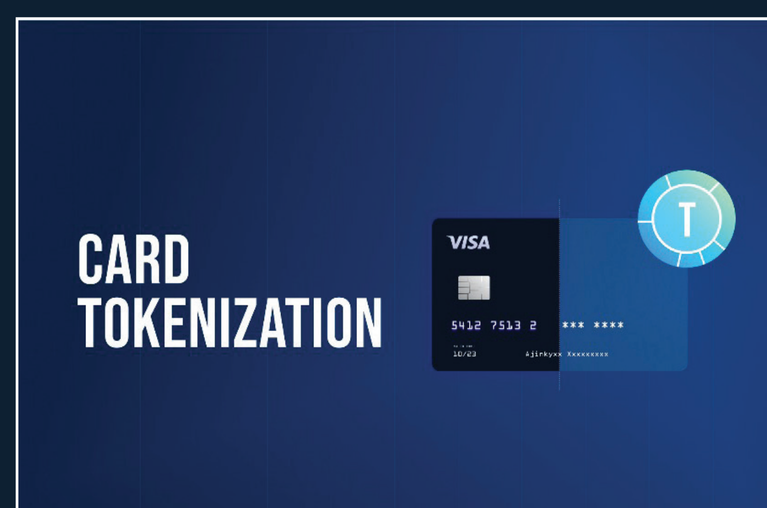
Juspay's estimated share of UPI P2M TPV



Source: Juspay/Avendus

Tokenisation:
In 2020, the RBI stated that merchants, payment aggregators and payment gateways can no longer store card credentials in order to improve the security of card transactions. It is estimated that 75% of transactions from leading online merchants use saved cards which store these card credentials. The RBI has approved tokenisation as an official solution for this, which converts card numbers to a unique irreversible merchant-scoped number. It works like a card although it doesn't work with any other merchant and has an expiry date. Tokenisation can be provided by card networks and card issuers (the only two entities that can store card details). All card details saved will be deleted by December 31st, 2021.

Juspay has been a big believer in tokenisation and has been investing ahead of this transition for over a year now. They have launched the first card tokenisation product in India for Visa, and as of today, Juspay has the only tokenisation solution in the market. Due to the risk of much lower card conversion rates as merchants transition to this new system, Juspay is experiencing strong demand in its merchant pipeline.

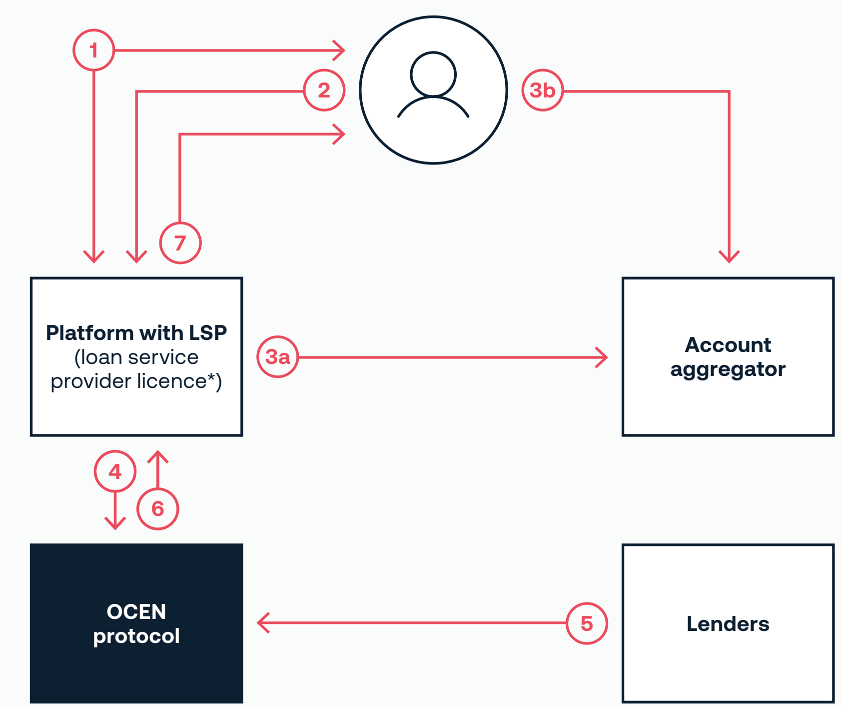


OCEN:
Open Credit Enablement Network (OCEN) is a new ecosystem which aims to bring financial products to SMEs and individuals (it forms part of The India Stack referenced earlier). The infrastructure's aim is to offer digital services to end users by providing solutions to four key challenges of the Indian ecosystem: customer identity and tedious paperwork, the dominance of physical cash, data protection and low credit penetration.

OCEN contains an API for each step of the lending lifecycle, such as loan origination, user consent for data, loan disbursal, customer service and collections. One of the key challenges faced by Fintech players in offering third party loan products is the integration of technology and systems with each bank, Non-Bank Financial Company (NBFC), or lending partner, which makes rolling out of products both time consuming and costly. With this new network in place, loan-providing Fintechs simply need to plug into the OCEN network to access loan products offered by different banks and NBFCs who are also plugged into OCEN. Juspay is helping the government build the architecture underpinning this protocol. It is also utilising the OCEN infrastructure to embed new lending tools into its app, which should increase merchant throughput and contribute to narrowing India's credit gap.[1]

1. Source: RBI, Finbox, CLSA

How would OCEN work in production?



1. Platform prompts credit availability based on user activity
2. Consumer accepts credit prompt

3a. Platform requests to access customer financial information (risk assessment, loan monitoring)

3b. Customer authentication

4. Platform requests for loan quote
5. OCEN queries financial intermediaries for loan quotes
6. Platform collects loan quotes
7. Platform presents user with most appropriate loan quotes

* LSP, which is a new regulatory structure, is a licence to be a "loan originator" for banks/NBFCs but with a duty to serve customers.

Source: Inc42 Media/VEF

What Juspay's customers say

Juspay's merchant clients have a collective market share of c. 80% in mobile payments, and include top merchants like Amazon, Flipkart, PhonePe, BigBasket, Swiggy and Ola.

Juspay has become a trusted partner of large enterprise players in India, which presented us at VEF with a scale growth opportunity: strong TPV growth driven by growing penetration of e-commerce and digital payments. This is a large and sticky customer base, across multiple sectors.

We spoke with Prashant Aiyar who leads payments across all business lines at BigBasket, one of its largest merchant partners, to better understand how they use Juspay's products and the value they attribute to them.

About BigBasket

BigBasket is the largest online grocery company in India. It was founded in 2011. In February 2021, the Tata Group acquired a 64.3% stake in BigBasket for c. US$1.3bn. Juspay powers their checkout page and handles all backend integration with payment processors. They are one of Juspay's top 5 clients.

How were online payments managed at BigBasket before Juspay and what were the main pain points?

We primarily worked with one large payment aggregator, who took care of most of our transaction flow. Key pain points were:

Concentration risk: We had limited flexibility around determining commercial terms, routing personalisation and product innovation. This ultimately meant that BigBasket became reliant on one or two key partners, which embedded concentration risk we were not comfortable with.

Transaction costs: Transaction costs were higher than they would have been if we had been directly integrated with banks. However, to do so, BigBasket would have had to navigate the associated compliance and regulatory hurdles on a case-by-case basis, particularly for bank relationships. This was not a scalable option.

Customer experience: The customer's payment experience was poor, with multiple friction points, which lowers conversion rates at point of sale.

When did you first start using Juspay and what were the main changes in payment management as a result?

We went live with Juspay in March 2019. BigBasket was, at the time, looking for more flexible and dynamic payment solutions and noticed Juspay's success marketed by key customers like Uber/ Swiggy. We also spoke to other merchants who recommended Juspay.

With Juspay, BigBasket's payment management effectively skips having to use payment aggregators and instead allows for direct integrations with select banks.

> **"We see Juspay as an extension of the BigBasket team. The main improvement we have seen is on the user experience side, with an average increase of 7–8% in success rates."**

What improvement have you seen post integration with Juspay?

Higher success rates: We see Juspay as an extension of the BigBasket team. The main improvement we have seen is on the user experience side, with an average increase of 7–8% in success rates ranging across cards, because their solution allows us to store the card natively in the customer basket, and UPI due to the strength of Juspay's rails.

Faster integration: Juspay's team and solution set allowed us to narrow the time to market for integrations from months to weeks. They have simplified the tech stack to integrate, and they have strong experience within the team having completed many integrations for large merchants already.

Lower costs: Our costs per transaction fell, and we realised cost efficiencies from shorter integration periods.

Better commercial terms: The change in payment management resulted in greater flexibility to negotiate commercial terms with banks.

What are the most value-added products you are using today?

BigBasket uses Juspay's products end-to-end. The Checkout Page is the most important – it involved deep integration, and it is key for limiting payment friction for the customer. We also value their leadership and innovation in UPI, which has been a major contributor to both faster customer adoption and high success rates. Lastly, their card tokenisation innovation is an industry first.

The future of Juspay

The future of Juspay will be characterised by:

Accelerating TPV growth driven by:

- Existing merchants' organic TPV growth (3x in medium term).
- Expanding engagement amongst the current client base: penetration of end-to-end payment services, offering new clients a bundle of its product suite.
- Entrance into new merchant verticals.

Improving unit economics through credit-as-a-service offering:

- Through OCEN, Juspay is launching a BNPL product at checkout for consumers and merchants, and it is building an SME financing marketplace to offer merchants and merchant suppliers greater access to credit. Both credit offerings will be financed by banks and should increase Juspay's overall net take rate as credit transaction penetration increases.

International expansion:

Juspay's ambitions are growing with its success. There are several avenues it is exploring to grow internationally:

Leading with innovation:

- 2FA: Globally, mobile commerce and 2FA adoption are increasing. Europe and the UK adopted Strong Customer Authentication (2FA) under PSD2. The Middle East and Southeast Asia are already 2FA compliant and mobile-first. Many players in these markets are looking to India, and Juspay, as leaders in innovation, for technical solutions.
- Secure Remote Commerce (SRC) is a standard adopted by card networks globally for making online payments secure and seamless. Juspay is the core partner for a major card network to build out SRC and launch in India first and take it international immediately after.

Growing with its merchants:

Juspay' existing merchants (Amazon, UBER, redBus, OLA, Mobikwik etc.) have a strong intent to leverage its solutions to replicate their India payments success story in other geographies.

Expanding with strong network of trusted partners:

As Juspay's shareholder base evolves and strengthens through sequential funding rounds, it will benefit from the increased network of its shareholder base, which is becoming increasingly internationalised.

It has an incredibly bright future ahead and, as a shareholder, we look forward to seeing the team fulfil its full potential.

Juspay in figures

The team is demonstrating best-in-class headline metrics amongst the software market in India today, with attractive unit economics

~US$60 bn
Annualized GMV (Oct 2021)

~11 mn
Average transactions per day
(Oct 2021)

~3x
Growth in transactions per day in last two years

200+
Total number of enterprise clients and merchants

80%
Market share of Juspay clients in digital payments

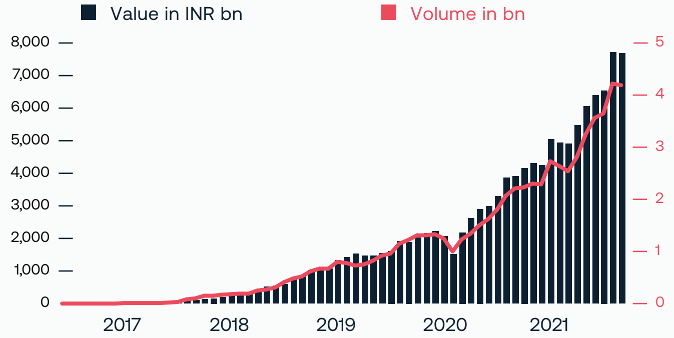
250 mn+
SDK installs

200%+
M12 revenue retention of enterprise clients

<0.5%
Monthly merchant churn

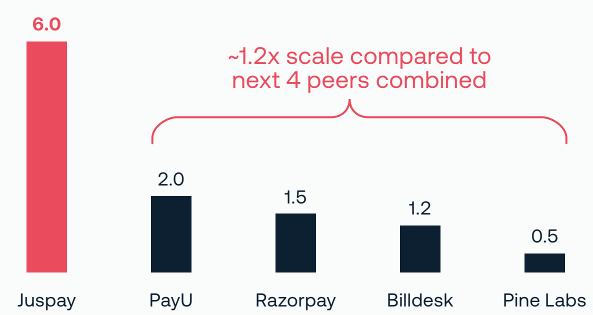
UPI is fast becoming the most favored method of digital payment...

Value and volume of UPI transactions in India
(Aug 2016–Nov 2021)



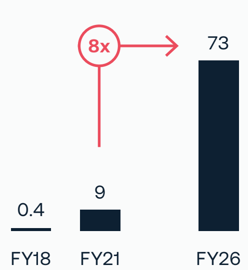
Juspay has achieved ~1.2x scale compared to next 4 peers combined

Transactions per day in millions

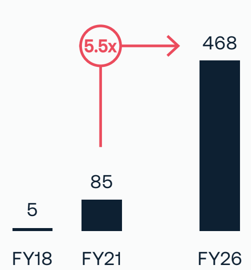


...projected to witness exponential growth over next 5 years

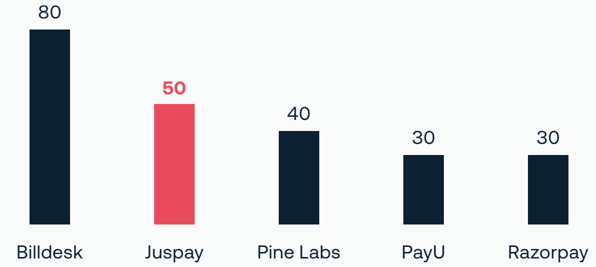
Number of UPI transactions
(P2M, bn)



Value of UPI transactions
(P2M, US$ bn)



Total annualized payments volume (US$ bn)



Source: VEF/Juspay

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